

ABSTRACT OF THE DISCLOSURE

In a refractive index coupling distributed semiconductor laser having a $\lambda/2$ -phase-shift distributed feedback structure having a diffraction grating having a refractive index coupling property on an active layer, when viewed in a light distributed feedback direction, a value of (duty of a high refractive index portion)/(duty of a low refractive index portion) of a diffraction grating in a rear end face region is set to be larger than that of a diffraction grating in a front end face region. In this manner, a coupling coefficient κ_2 in a front end face region of a conventional semiconductor laser is set to be smaller than a coupling coefficient κ_1 in a rear end face region and is set to be larger than 100 cm^{-1} .